tions of 400 adult blue shrimp (*Penaeus stylirostris*) from wild and cultivated (F_6) populations, were applied (wild females and males, wild females and cultivated males, cultivated females and wild males, and cultivated females and males). Females were inspected every third day. Those observed with spermatophores were captured and transferred to individual 100-ℓ spawning tanks. Water was treated with EDTA and erythromycin phosphate. More than 300 individual spawns were evaluated within a 180-day period. To evaluate the nauplii production per female, an analysis of variance for a factorial arrangement ($4^3 \times 2$) was conducted. The factors considered were: the abovementioned treatments, different ovarian maturation stages, adhesion of the spermatophore, and kind of spawning (complete or partial). The mixed populations had higher nauplii production than the cultivated broodstock. All the females were tagged around an eyestalk and examined for rematuration. Up to six rematurations per female were registered as well as a minimum of four days between successive spawnings for the same female. The effect of rematuration on the quantity of nauplii is discussed. Gonadosomatic index for wild and cultivated females is compared. Selective criteria for spawners are given.

Nutritional Value of Marine Yeast Fed to Larvae of *Penaeus monodon* in Combination with Algae

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Saccharomyces cerevasiae and *Rhodotorula aurantica*, two marine yeast species, were fed to *Penaeus monodon* larvae (N_6 to M_1) singly and in combination with *Tetraselmis* sp. and *Chaetoceros calcitrans* in varying proportions. Larvae fed combination diets gave survival rates comparable to or higher than those fed algae or yeast alone. Chemical analyses show that the yeasts have low fat, moderate protein and high carbohydrate content. They also contain essential amino acids but are different in the fatty acids found to be essential for prawns. When used in combination with algae, the nutritional value of the yeasts seemed to have been improved.

The use of marine yeasts in larval rearing could reduce economic and technological inputs in the production of natural foods for larval rearing. They are cheaper and easier to mass produce. They can be grown to very high densities using cheap carbon sources like molasses, brown sugar and coconut water with added nutrients in relatively shorter periods of time.

The Growth of a Bialgal Culture and its Use as Food for Shrimp Larvae

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The cultivation of the microalga *Tetraselmis chuii* with the protection of the extracellular products of *Chlorella kessleri*, grown in a bialgal culture, allows its development in outdoor tanks without special conditions of sterilization or aeration. Fish meal and agricultural inorganic compounds are used as fertilizers. The growth of the mixed species is analyzed comparing it with monoalgal cultures. The best fit of growth data to a logistic curve is performed and the whole curve is compared using a covariance analysis. The stratification of *T. chuii* in the tank favors its harvest at high concentration. A bialgal culture (based on *T. chuii* at 50 cells/mm^3) as food for the larvae of the shrimps *Penaeus notialis* and *P. schmitti*, together with hard boiled egg yolk and rotifers, achieves good development and survival.

The Integrated Use of *Artemia* in Shrimp Farming

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The use of freshly hatched *Artemia* nauplii in penaeid hatcheries is a common practice, although a broader application of *Artemia* in shrimp farming is gaining more and more interest. In this regard, an integrated use of *Artemia* in shrimp culture is presented in this paper.

Artemia booster in combination with Fleischmann yeast has been proven to be a suitable algal substitute and the early feeding of decapsulated *Artemia* cysts at protozoea I to II stages has been shown to improve larval growth. Freshly hatched *Artemia* nauplii may be introduced at protozoea II to III and the use of enriched nauplii from mysis stage on clearly improves postlarval production. Enriched nauplii, pre-adult and adult *Artemia* can be successfully used in a nursery phase in order to improve weaning success and performance in grow-out ponds. Furthermore, the use of adult *Artemia* in broodstock feeding has been shown to be effective for inducing maturation.

All *Artemia* products mentioned can be purchased from commercial dealers but can be produced as well on the spot in